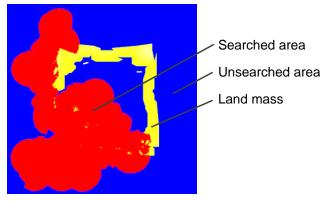
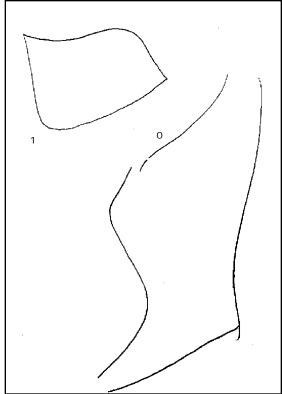
Appendix E

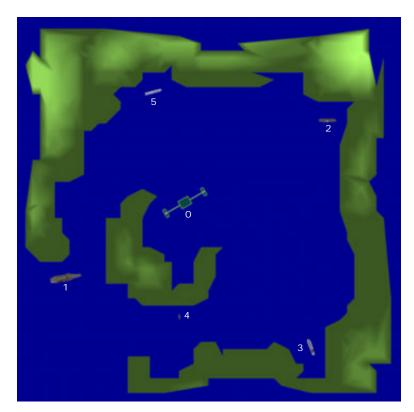
This appendix presents the path chart, the viewed area, and the drawn map data as supplied by each subject at the conclusion of each trial. The treatments are shown in the following order; control treatment, map treatment, grid treatment, and map/grid treatment. Within each subject and for each treatment, four images are shown on facing pages. All images are oriented in the same direction. The top left image is the path chart. It shows the world used in that treatment with the targets numbered. The dotted line shows the actual path travelled by the subject. Since the position and orientation samples were taken in constant time intervals, the distance between dots shows the relative velocity at that point. Widely spaced dots indicate high speed, tightly spaced dots indicate low speed, and dark, larger spots indicate that the subject stopped completely. The top right image shows the actual world as it really appeared (except for the scaling and numbering of the targets). This is provided for comparison purposes. The grid is added as appropriate. The post ordering on the grid, starting at the top in clockwise order, is yellow, brown, blue, and green, with red in the center. The bottom left image is the map as drawn by the subject. It has been given a border and the target indicators have been replaced with plain numbers for easier reading. All other markings are preserved. Lastly, the bottom right image shows the viewed area for the path. A field of view "footprint" is placed at each of the dots shown in the path chart (upper left) indicating the area that was searched. The sea area shows the space in which a target could have been located but which was not searched. The remaining area indicates the land that was not searched.

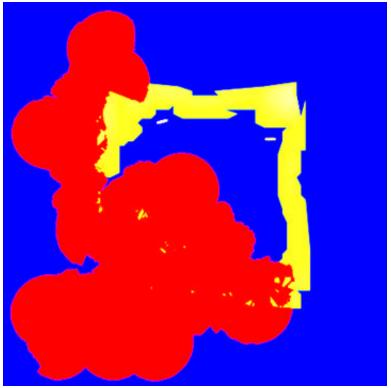


Subject 1 — Control Treatment

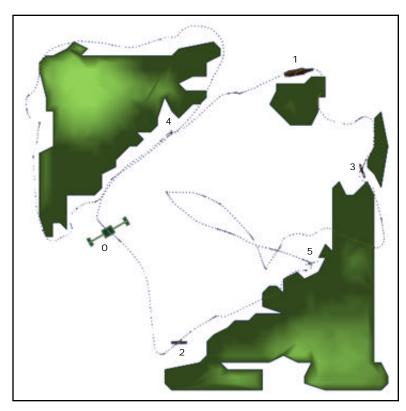


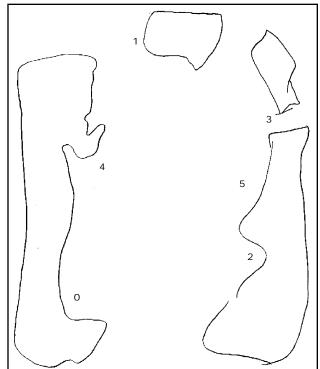


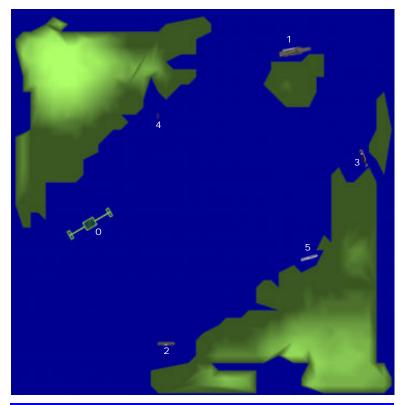


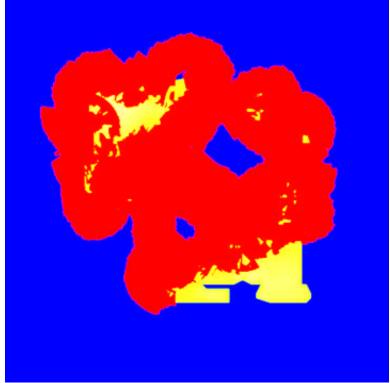


Subject 1 — Map Treatment

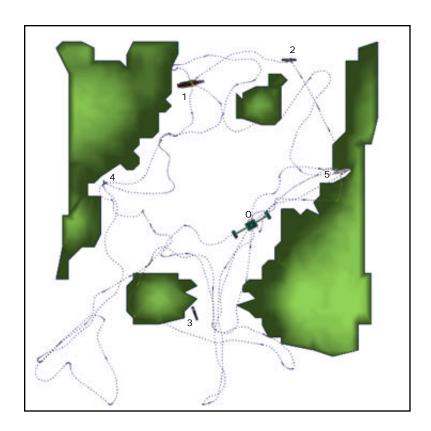


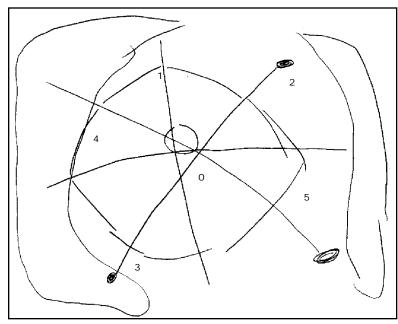


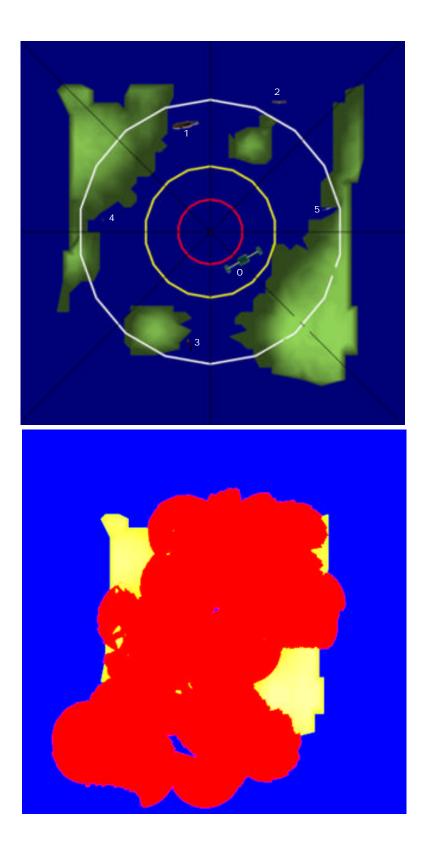




Subject 1 — Grid Treatment

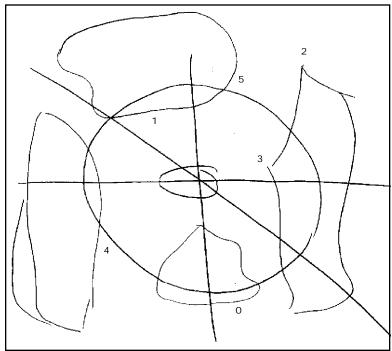


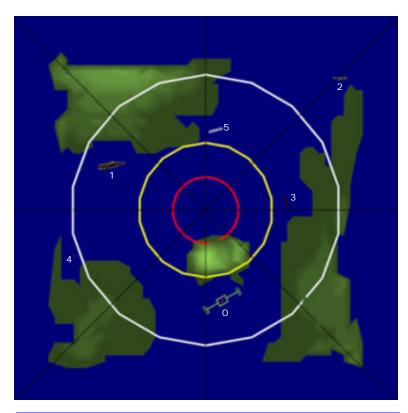


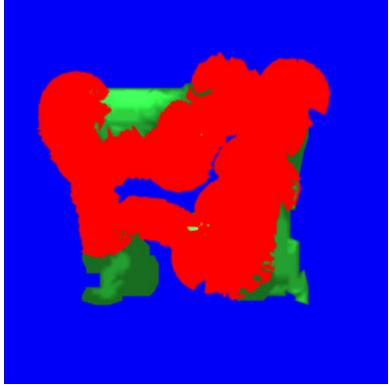


Subject 1 — Map/Grid Treatment



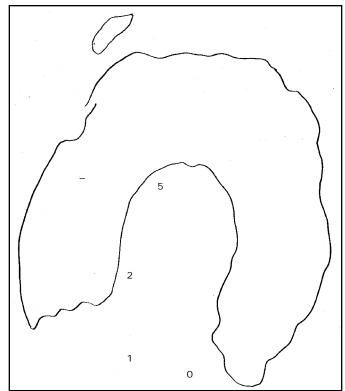


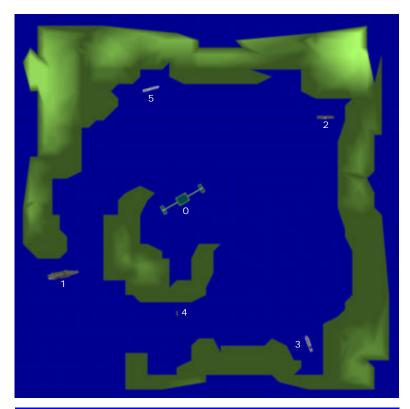


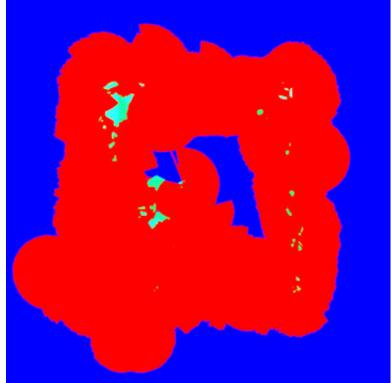


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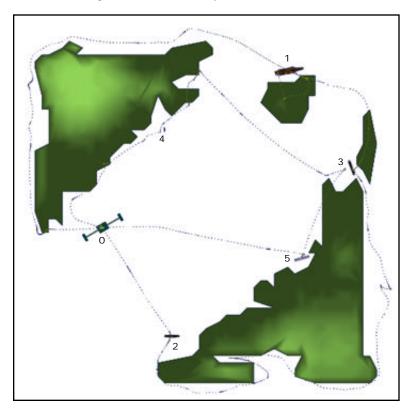


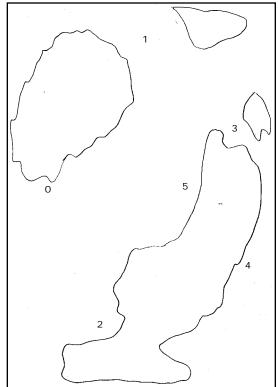


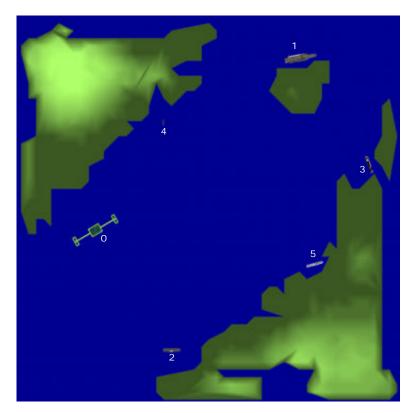


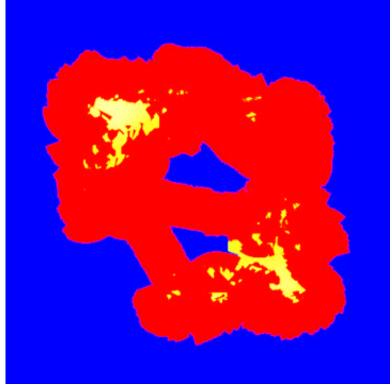


Subject 2 — Map Treatment

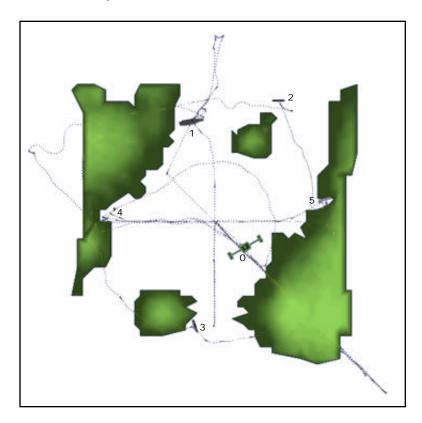


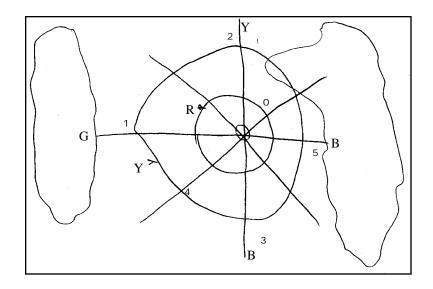


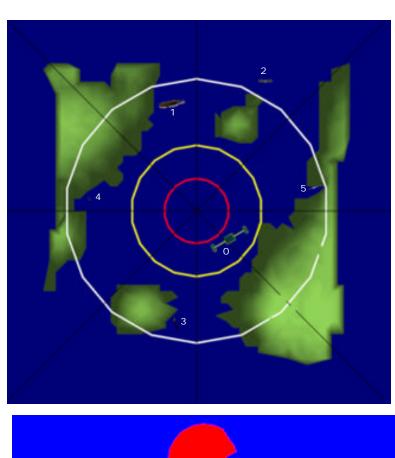


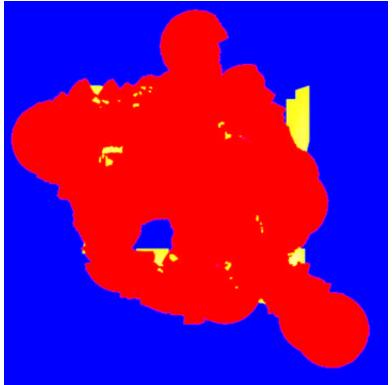


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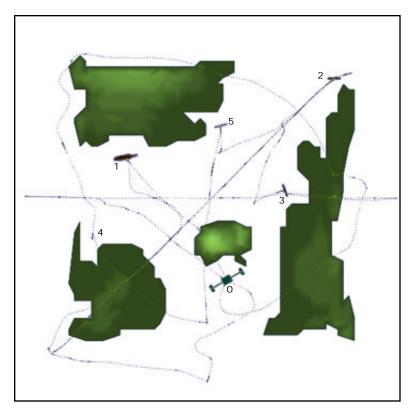


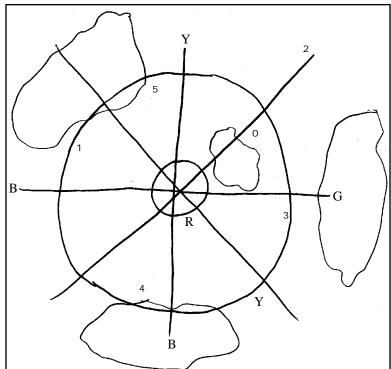


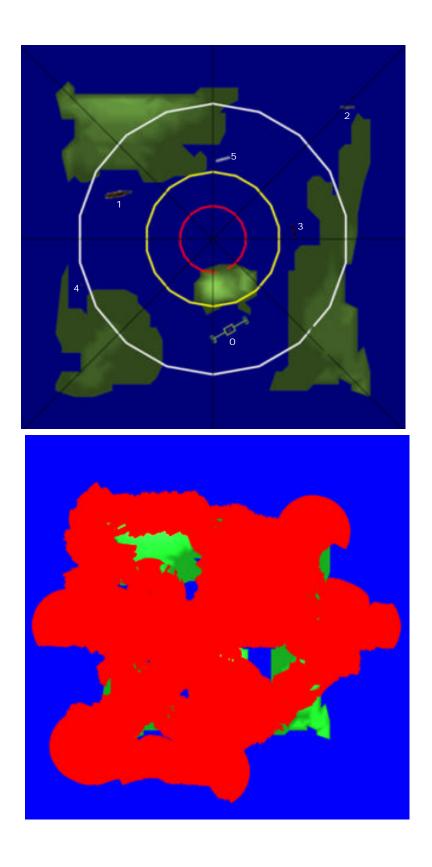




Subject 2 — Map/Grid Treatment

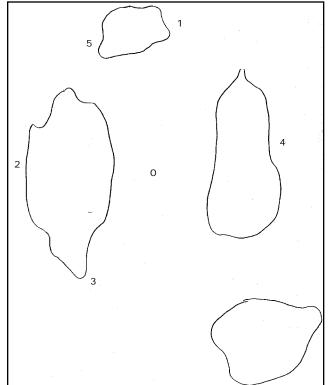


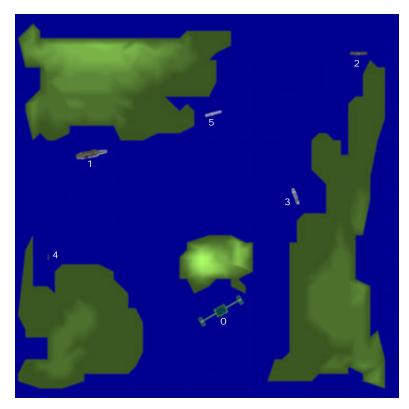


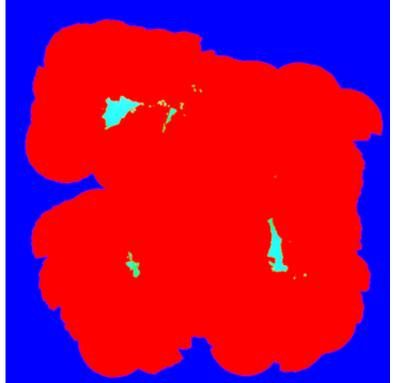


Subject 3 — Control Treatment

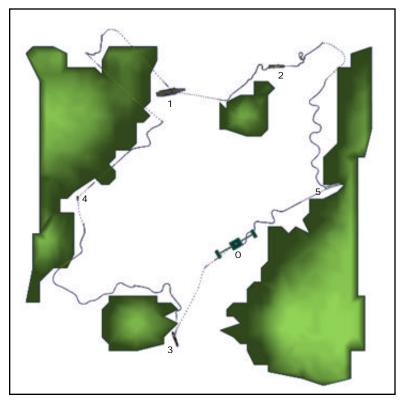


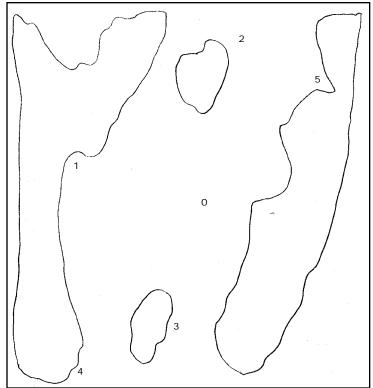


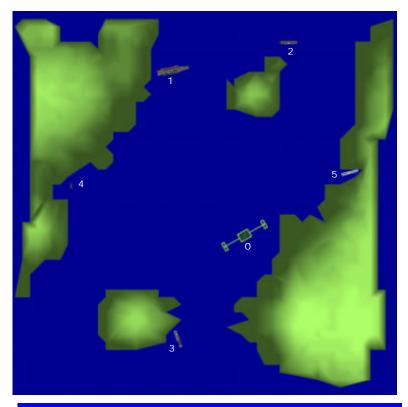


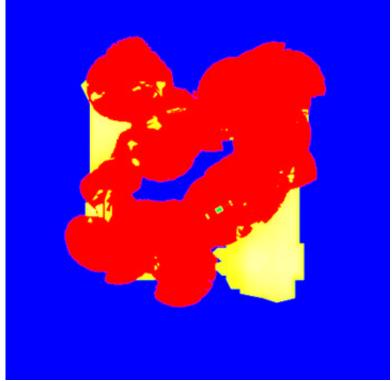


Subject 3 — Map Treatment

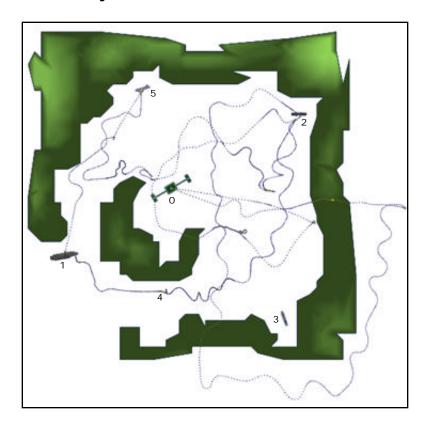


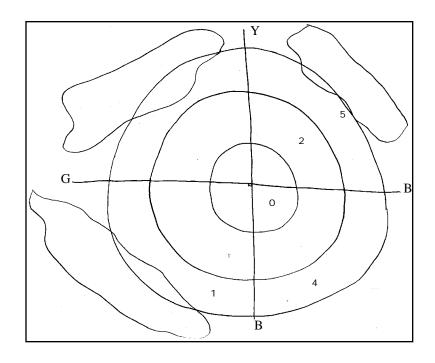


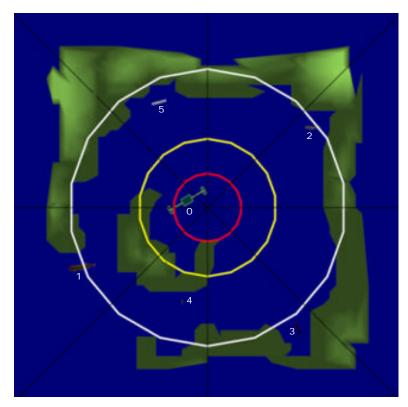


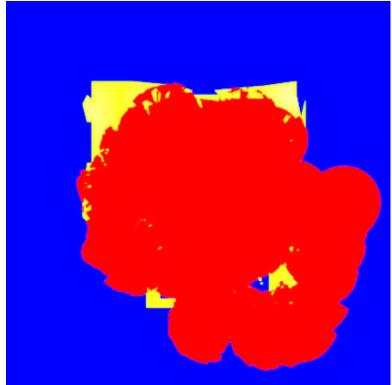


Subject 3 — Grid Treatment

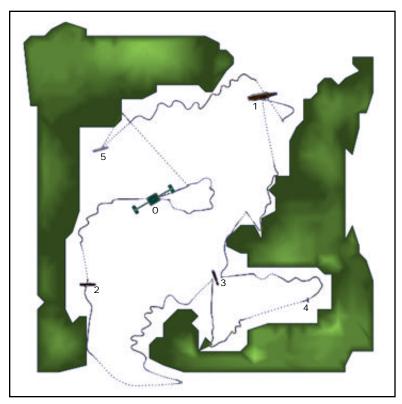


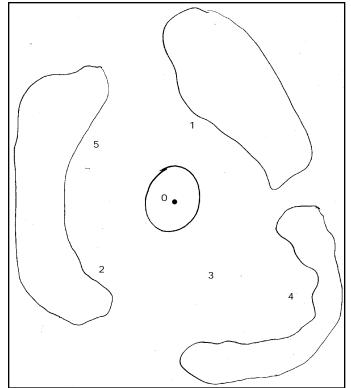


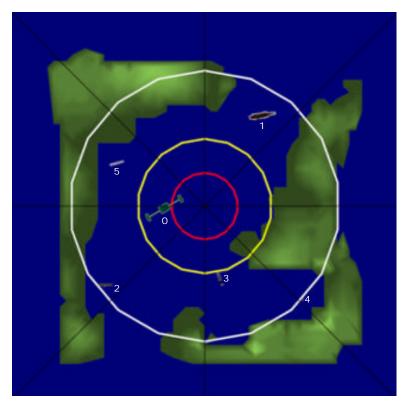


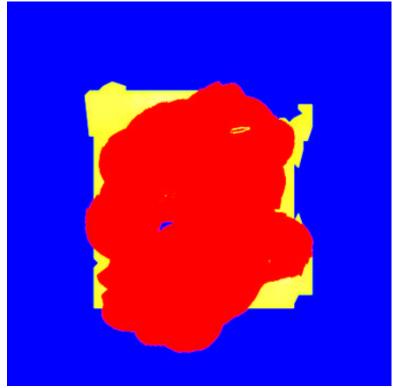


Subject 3 — Map/Grid Treatment

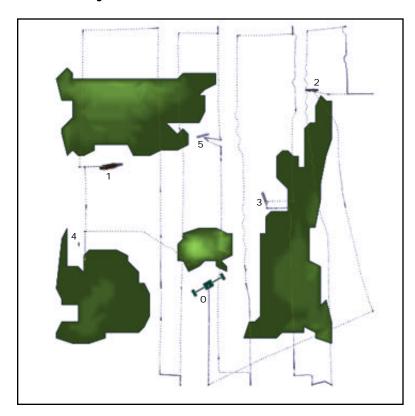


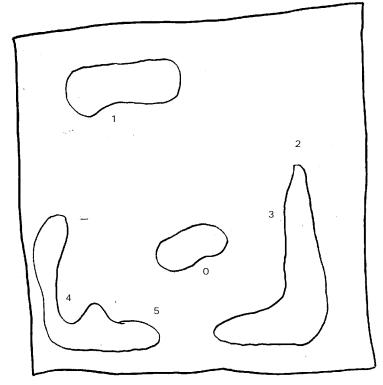


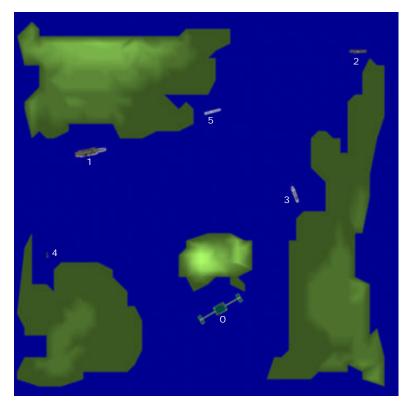


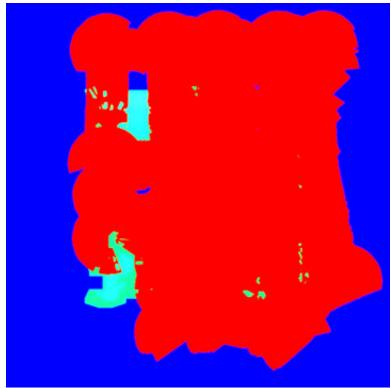


Subject 4 — Control Treatment

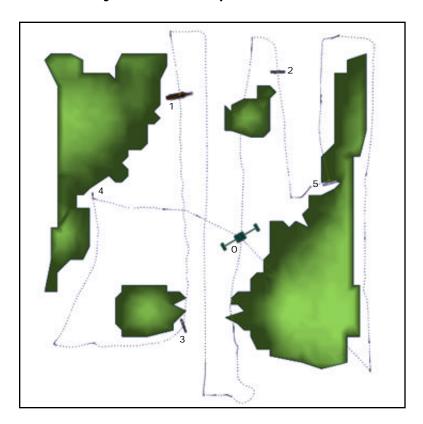


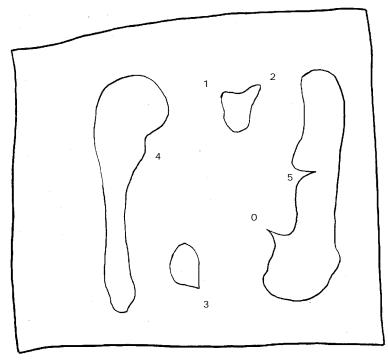


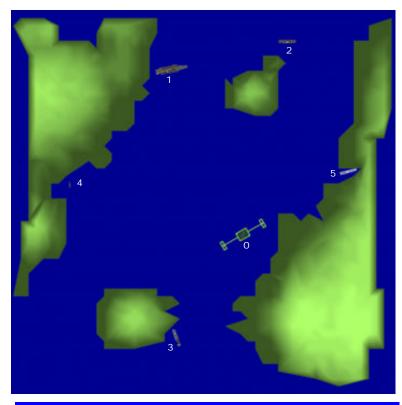


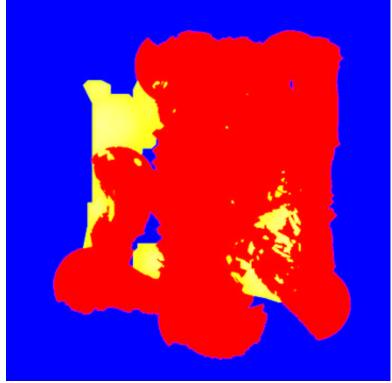


Subject 4 — Map Treatment

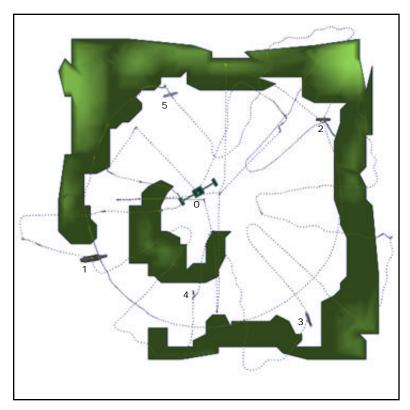


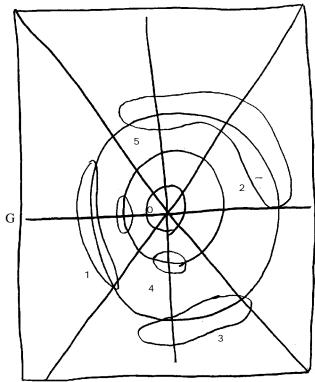


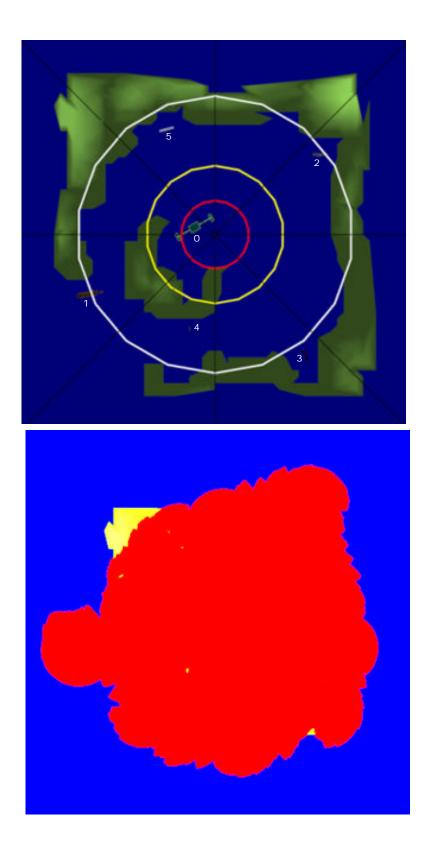




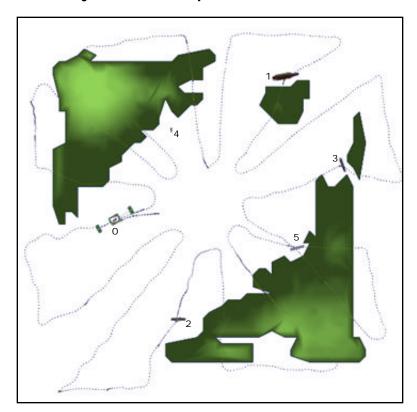
Subject 4 — Grid Treatment

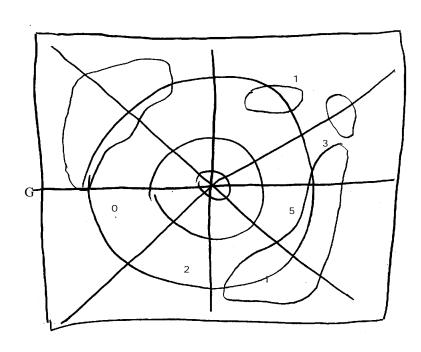


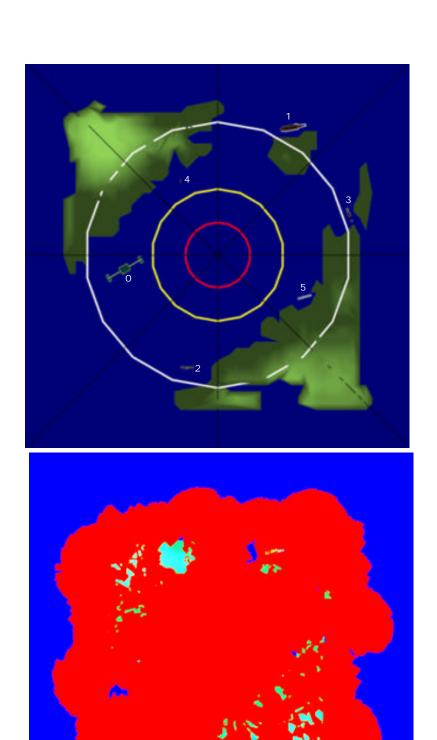




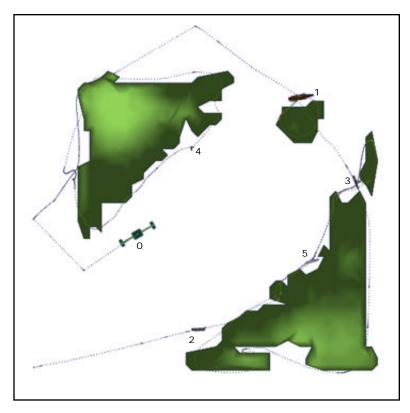
Subject 4 — Map/Grid Treatment

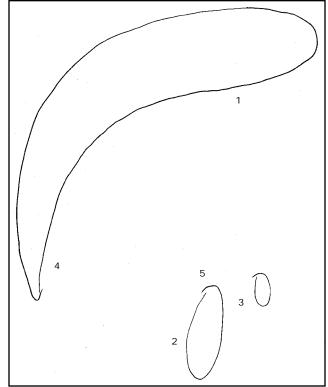


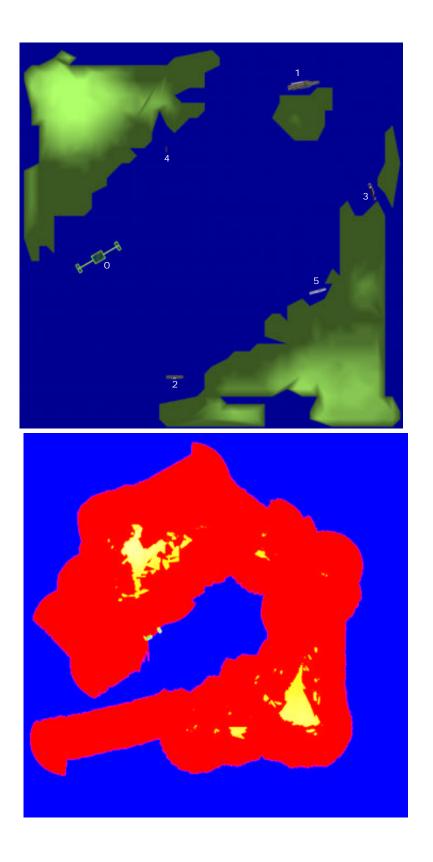




Subject 5 — Control Treatment

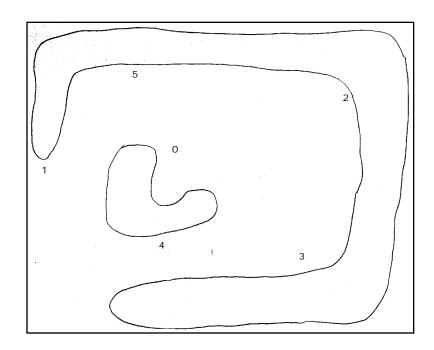


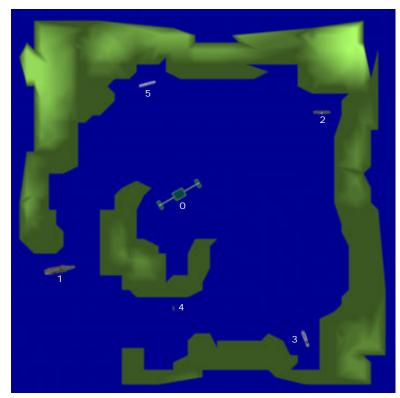


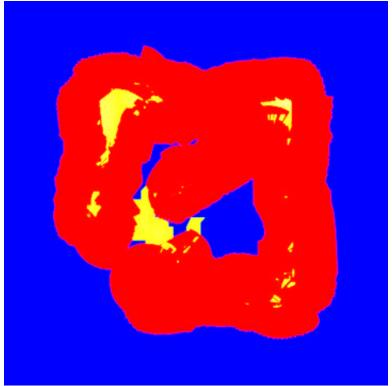


Subject 5 — Map Treatment

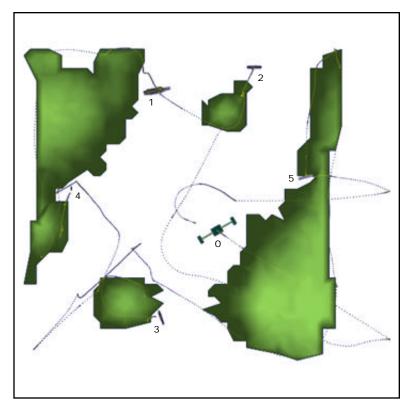


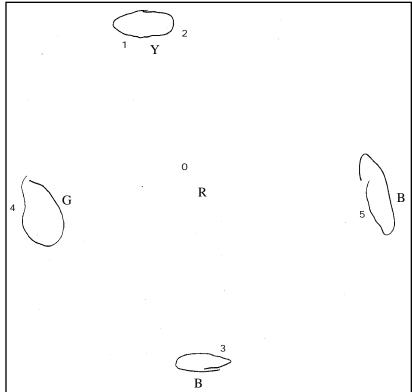


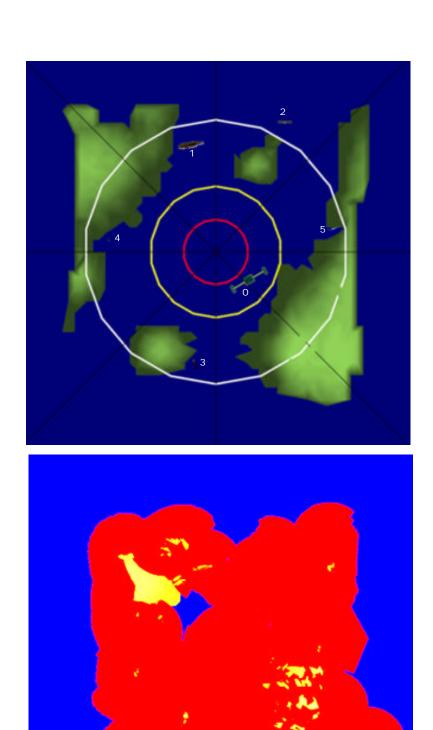




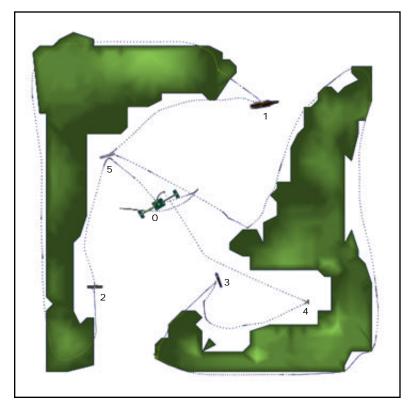
Subject 5 — Grid Treatment

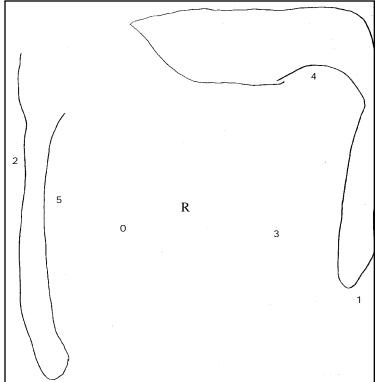


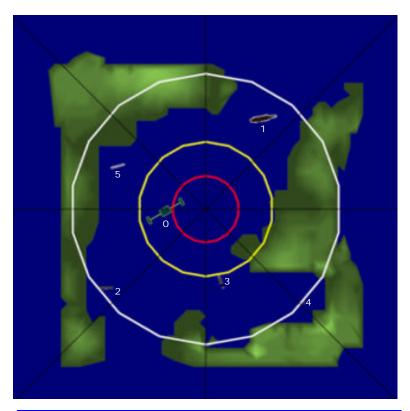


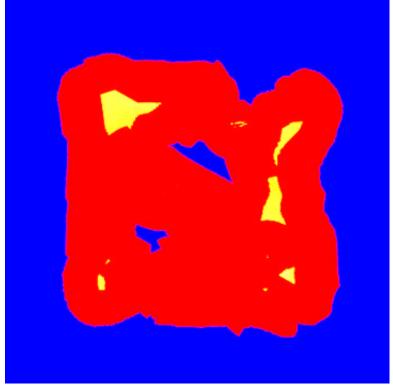


Subject 5 — Map/Grid Treatment



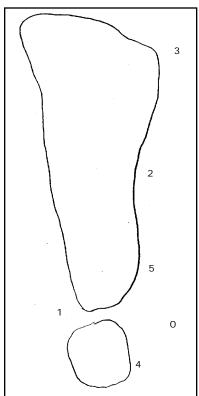


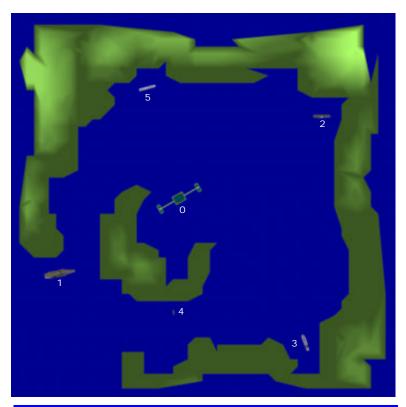


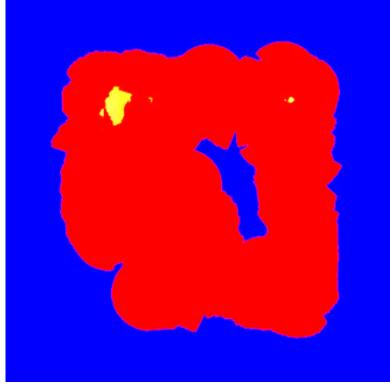


Subject 6 — Control Treatment



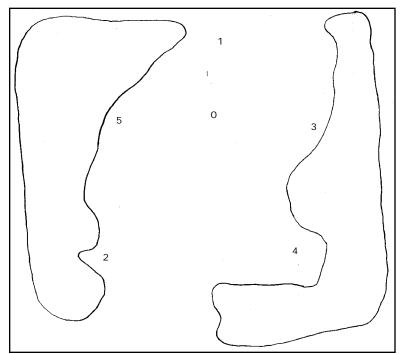


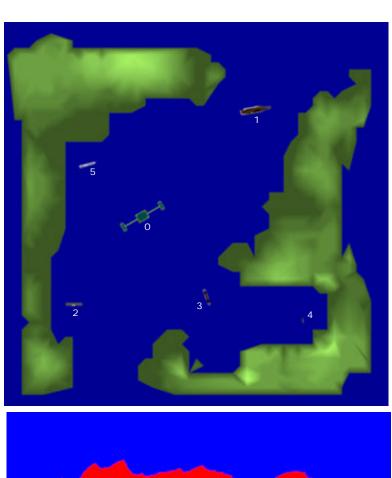


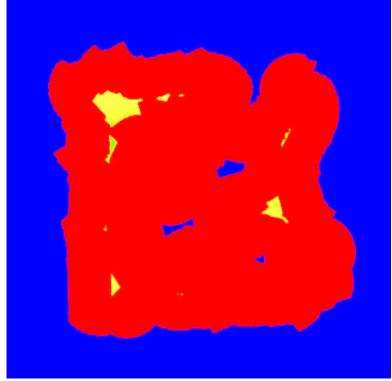


Subject 6 — Map Treatment

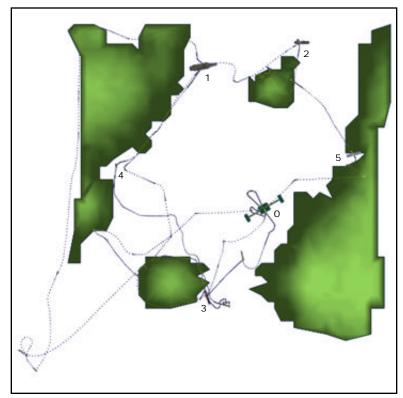


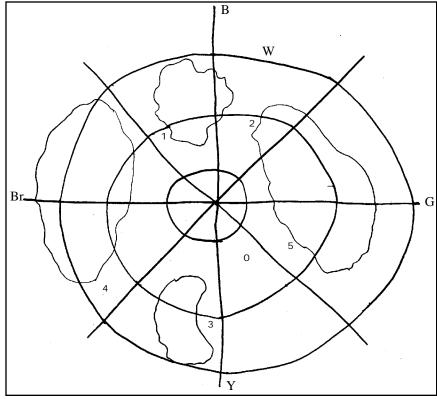


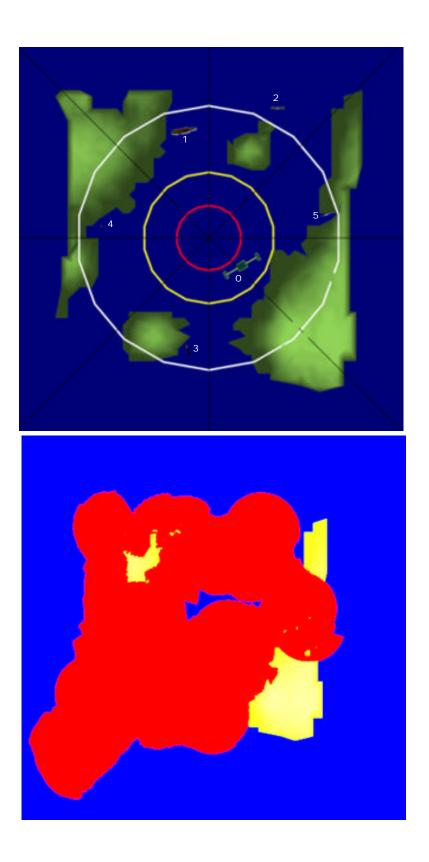




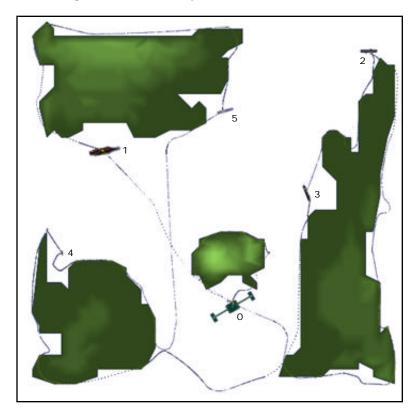
Subject 6 — Grid Treatment

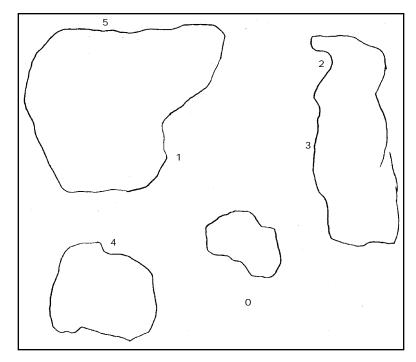


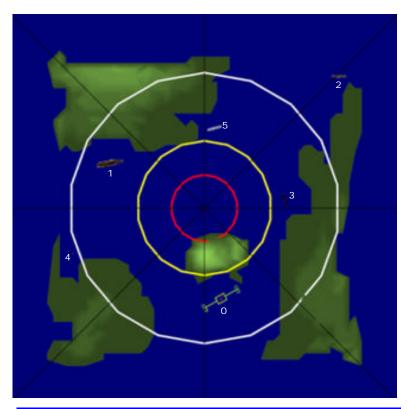


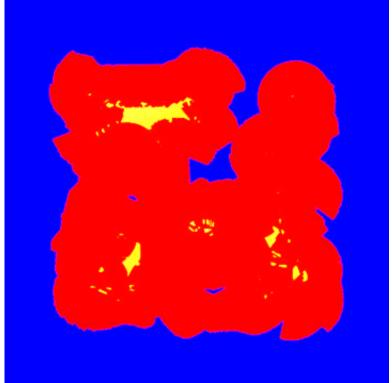


Subject 6 — Map/Grid Treatment



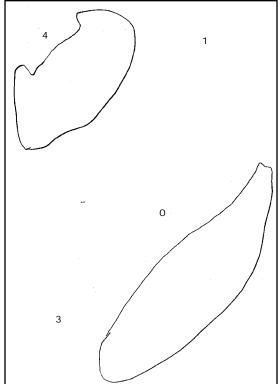


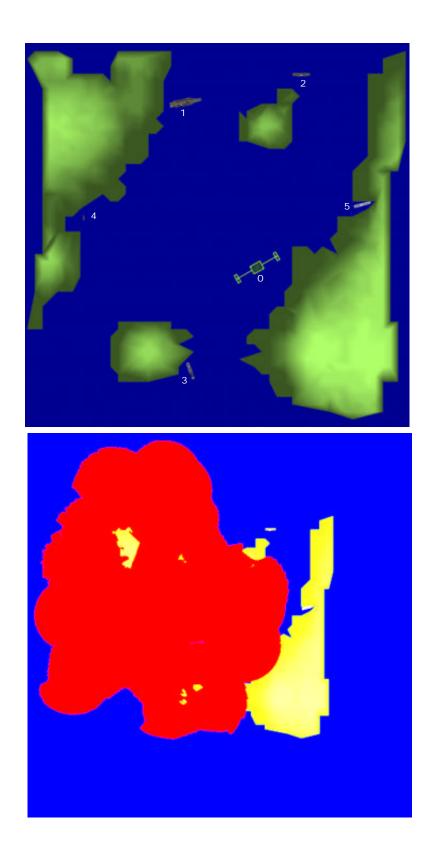




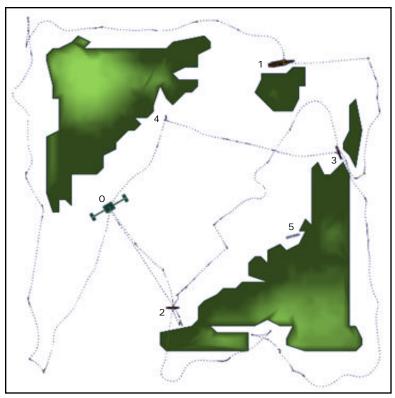
Subject 7 — Control Treatment

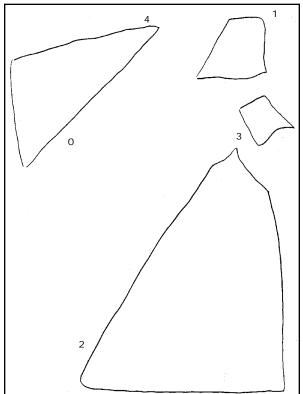


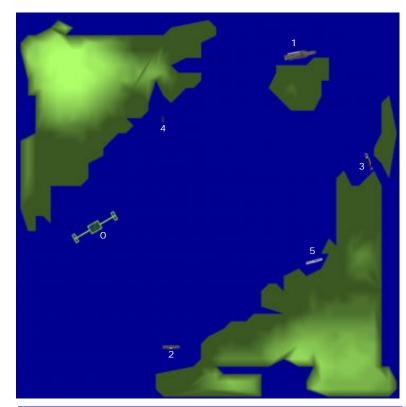


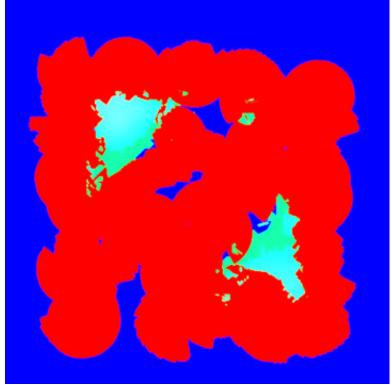


Subject 7 — Map Treatment

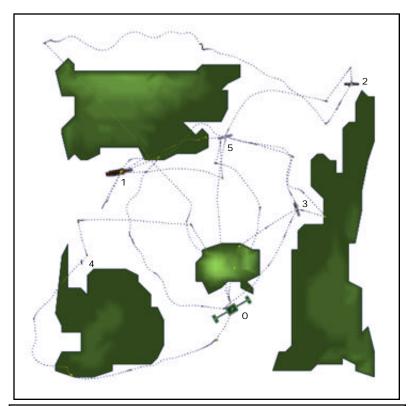


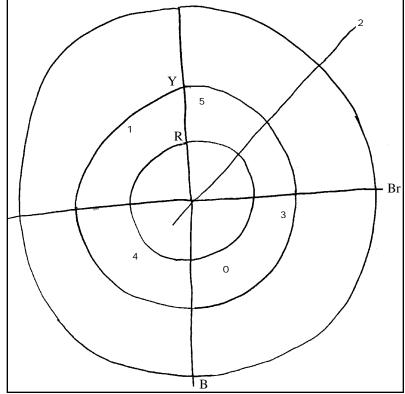


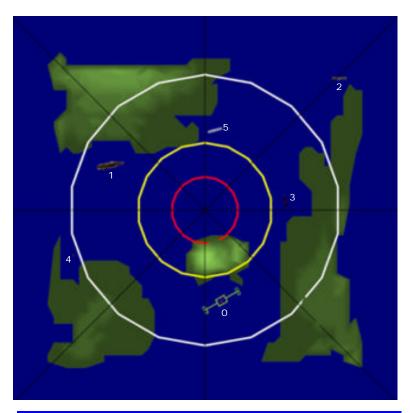


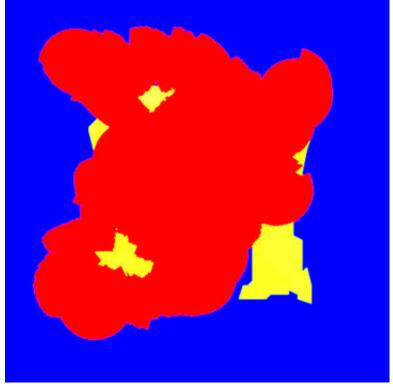


Subject 7 — Grid Treatment

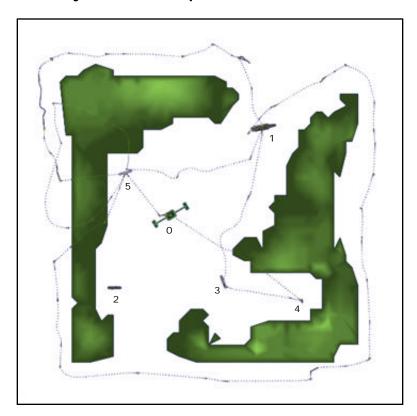


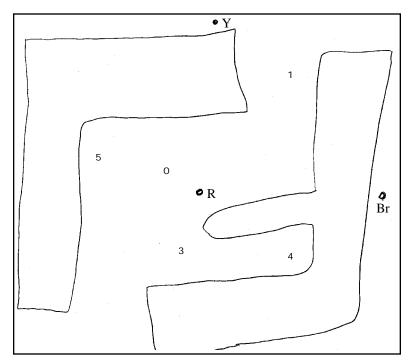


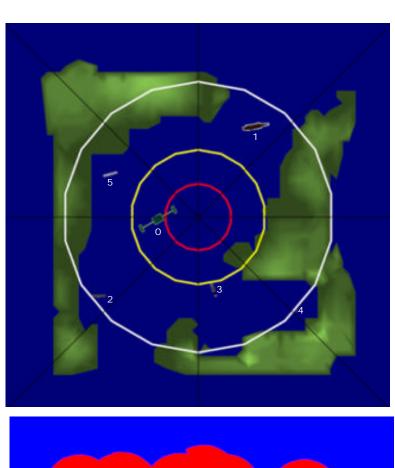




Subject 7 — Map/Grid Treatment



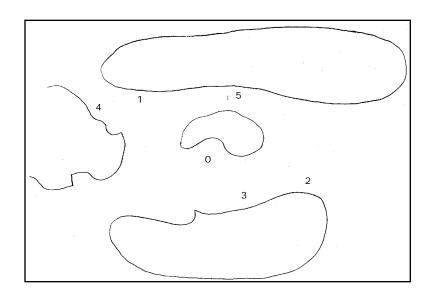


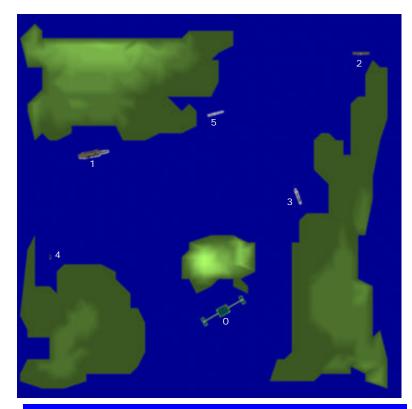


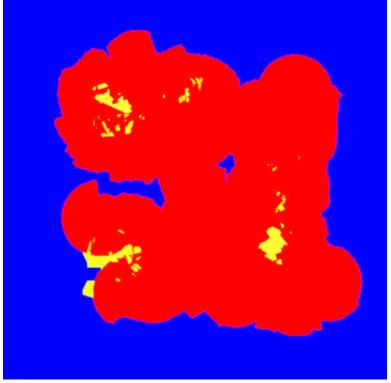


Subject 8 — Control Treatment

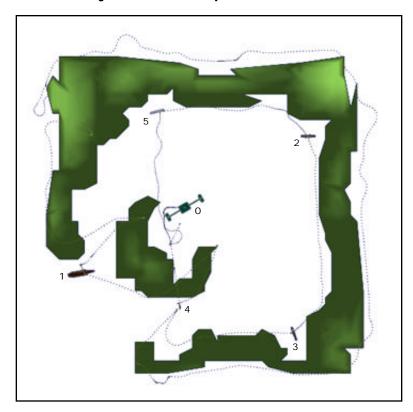


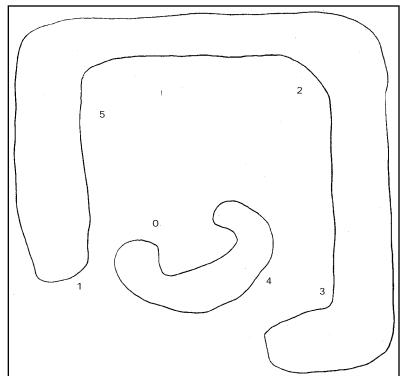


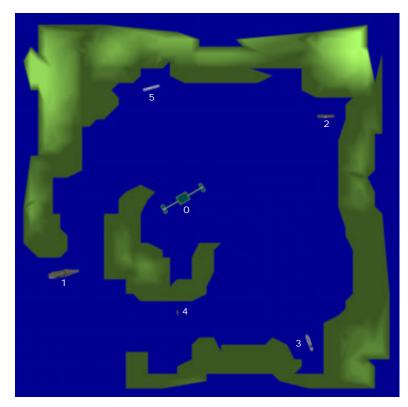


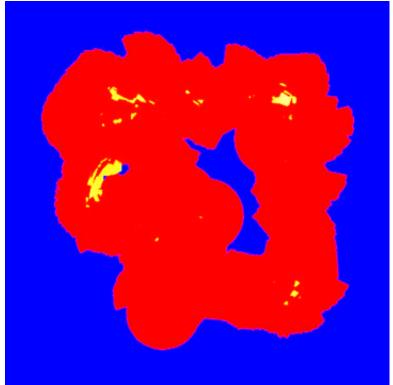


Subject 8 — Map Treatment

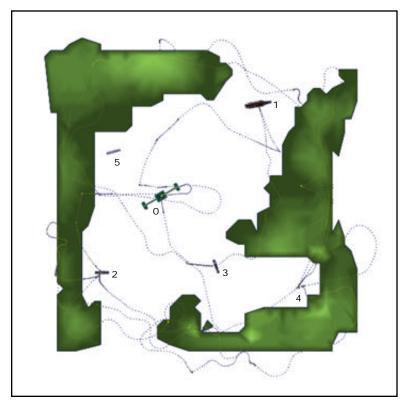


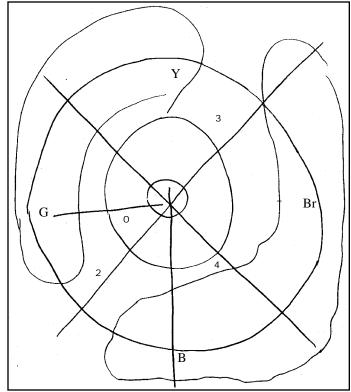


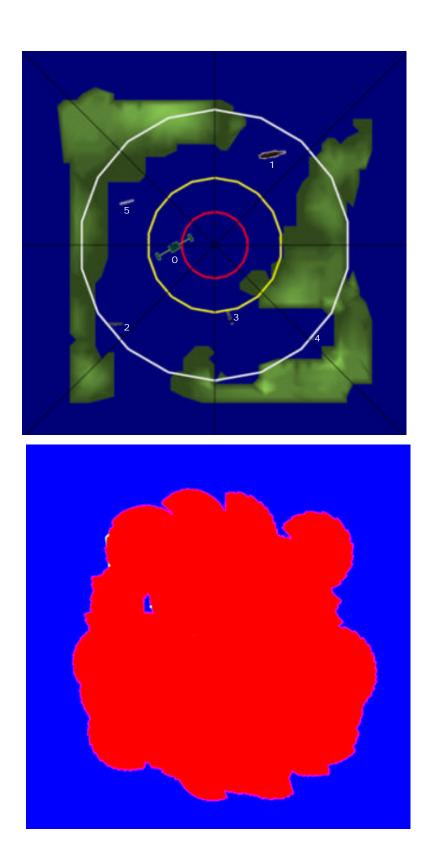




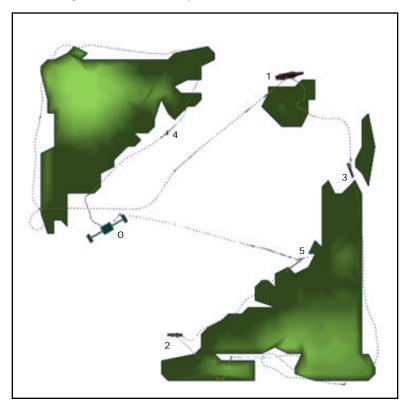
Subject 8 — Grid Treatment

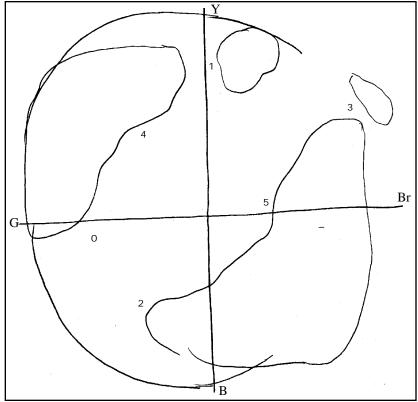


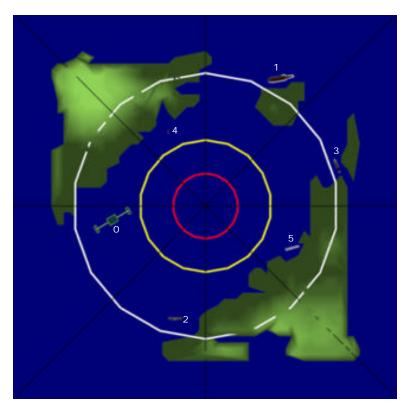


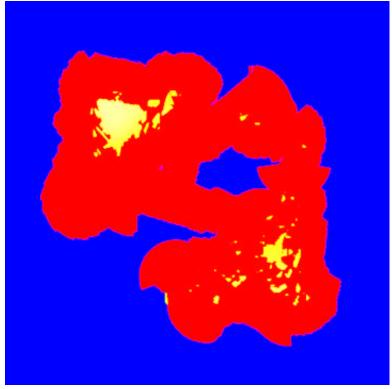


Subject 8 — Map/Grid Treatment

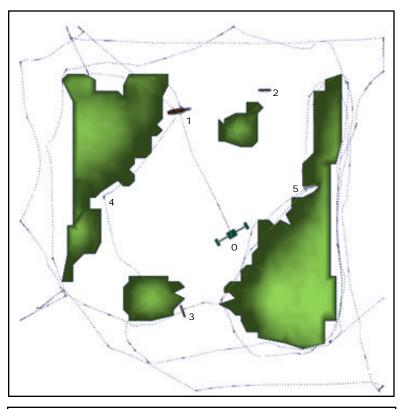


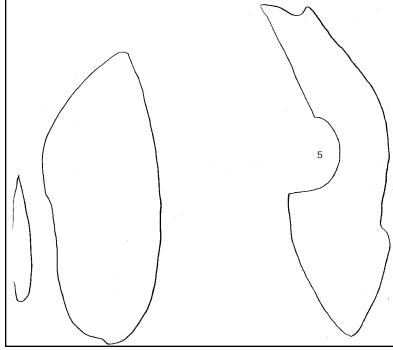


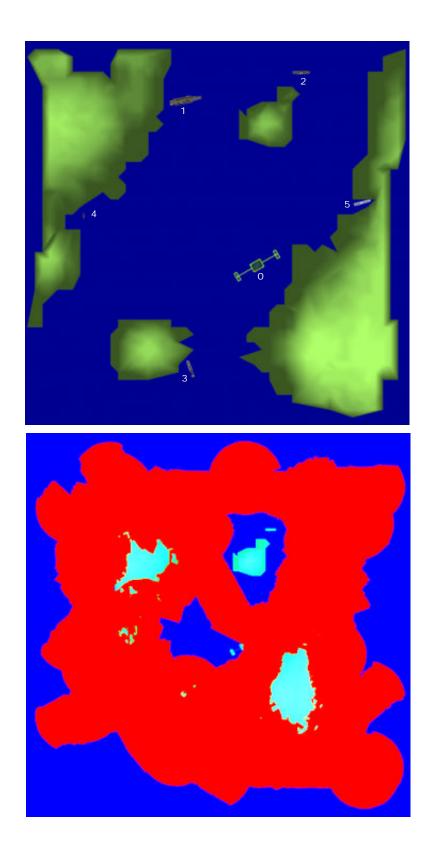




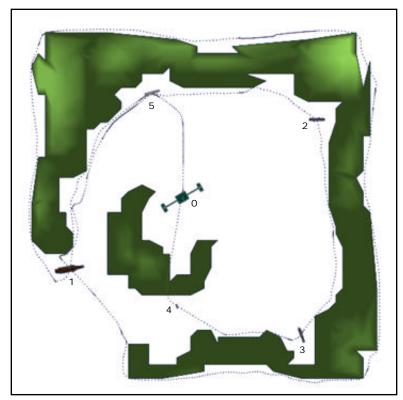
Subject 9 — Control Treatment

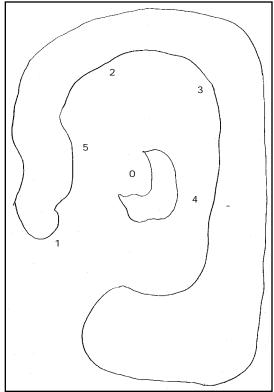


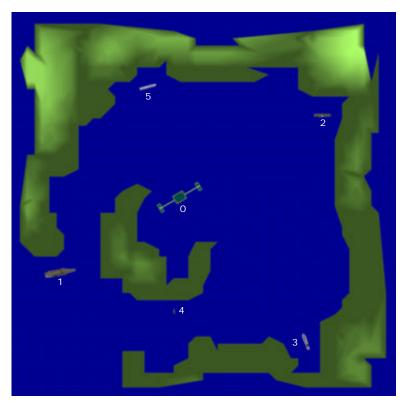


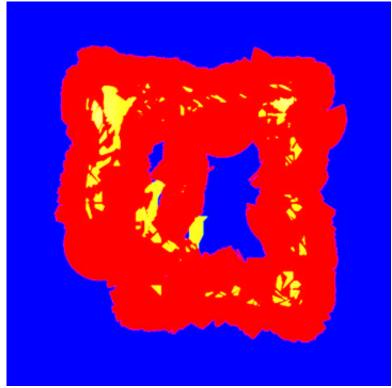


Subject 9 — Map Treatment

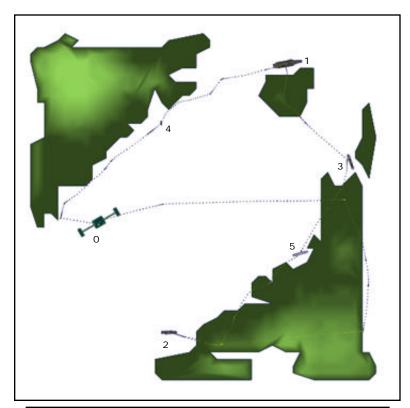


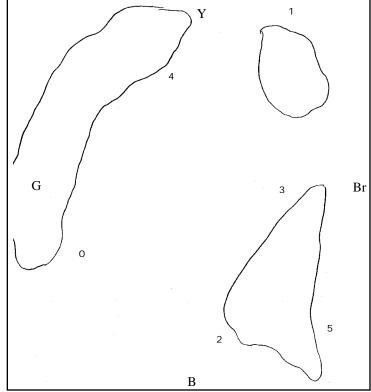


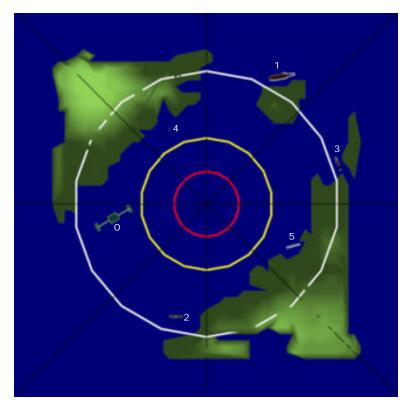


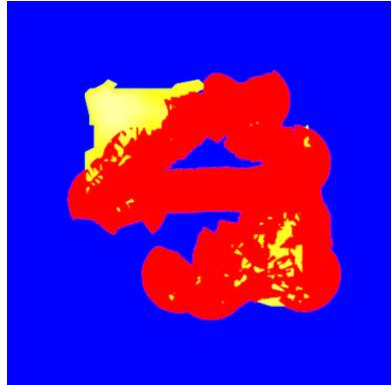


Subject 9 — Grid Treatment



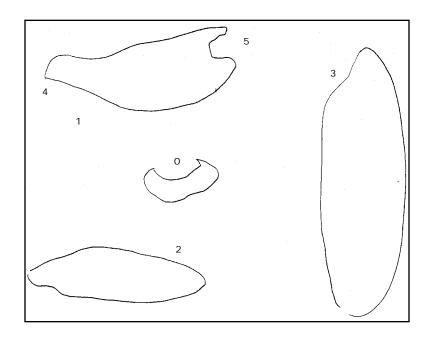


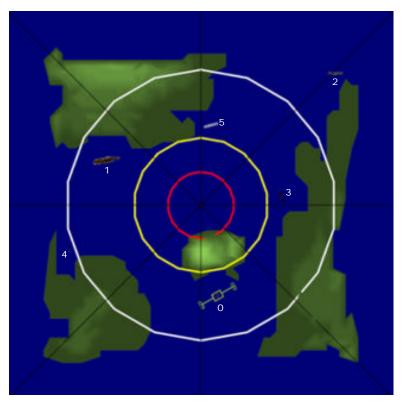


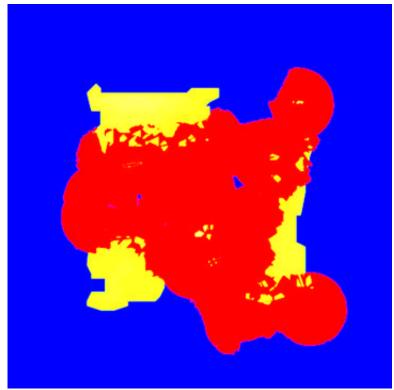


Subject 9 — Map/Grid Treatment

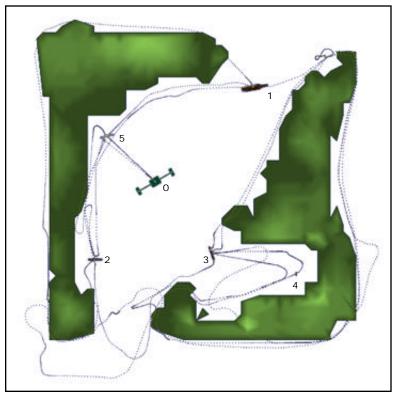


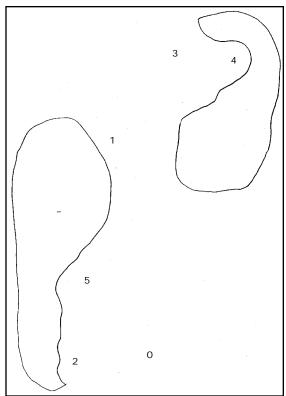


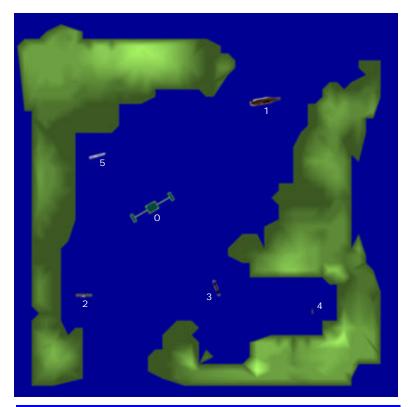


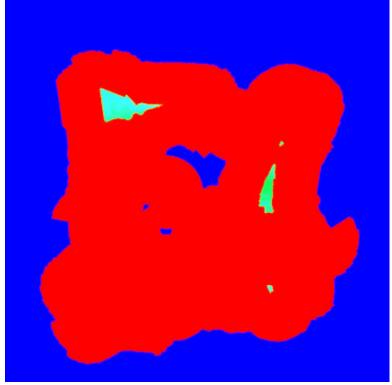


Subject 10 — Control Treatment



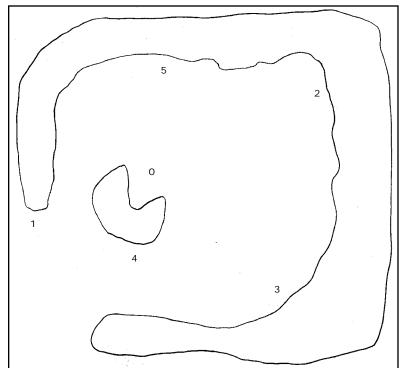


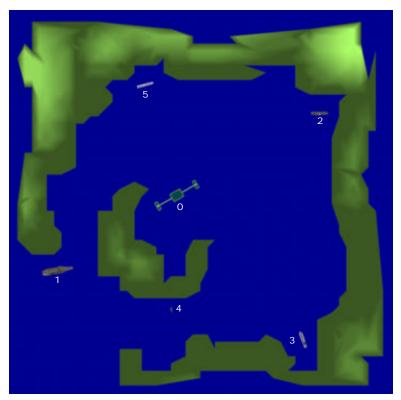


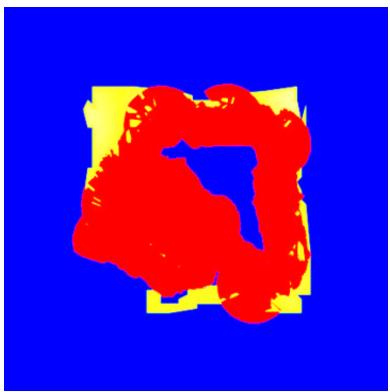


Subject 10 — Map Treatment



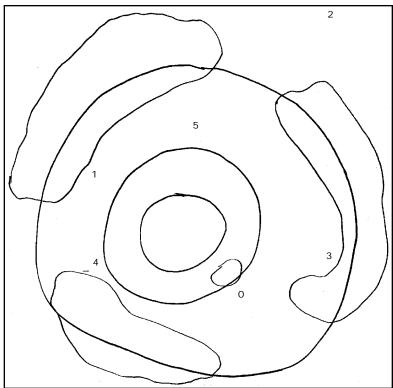


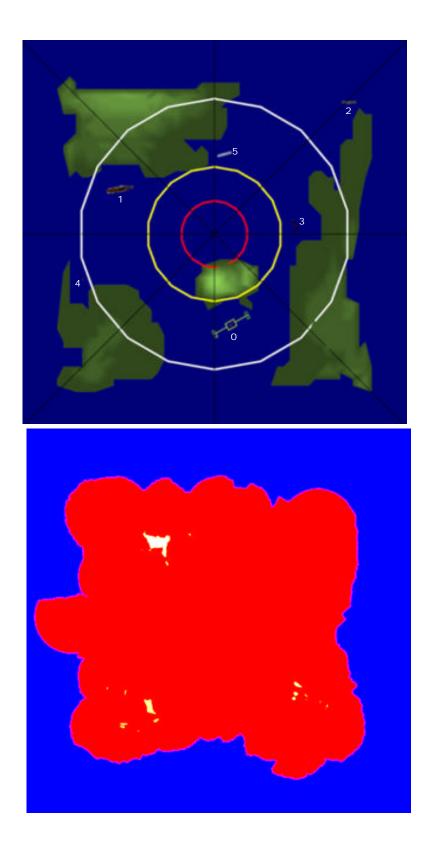




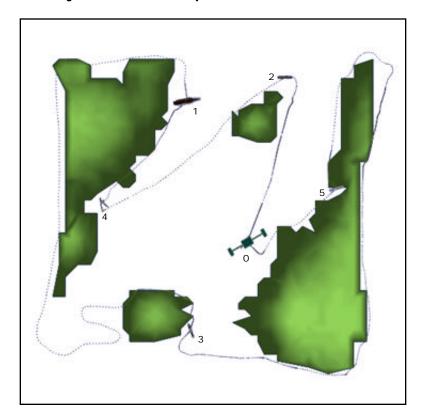
Subject 10 — Grid Treatment

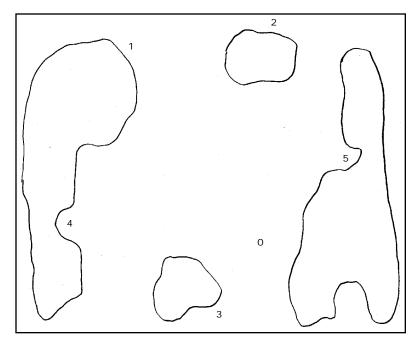


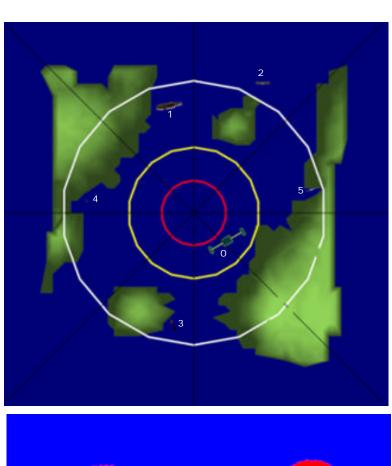


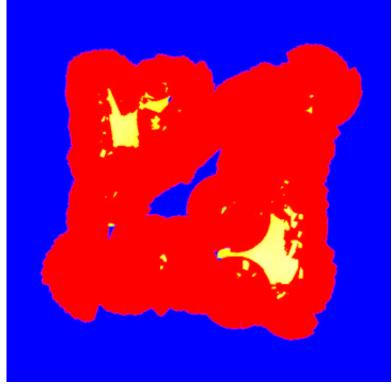


Subject 10 — Map/Grid Treatment









Wayfinding in Large-Scale Virtual Worlds